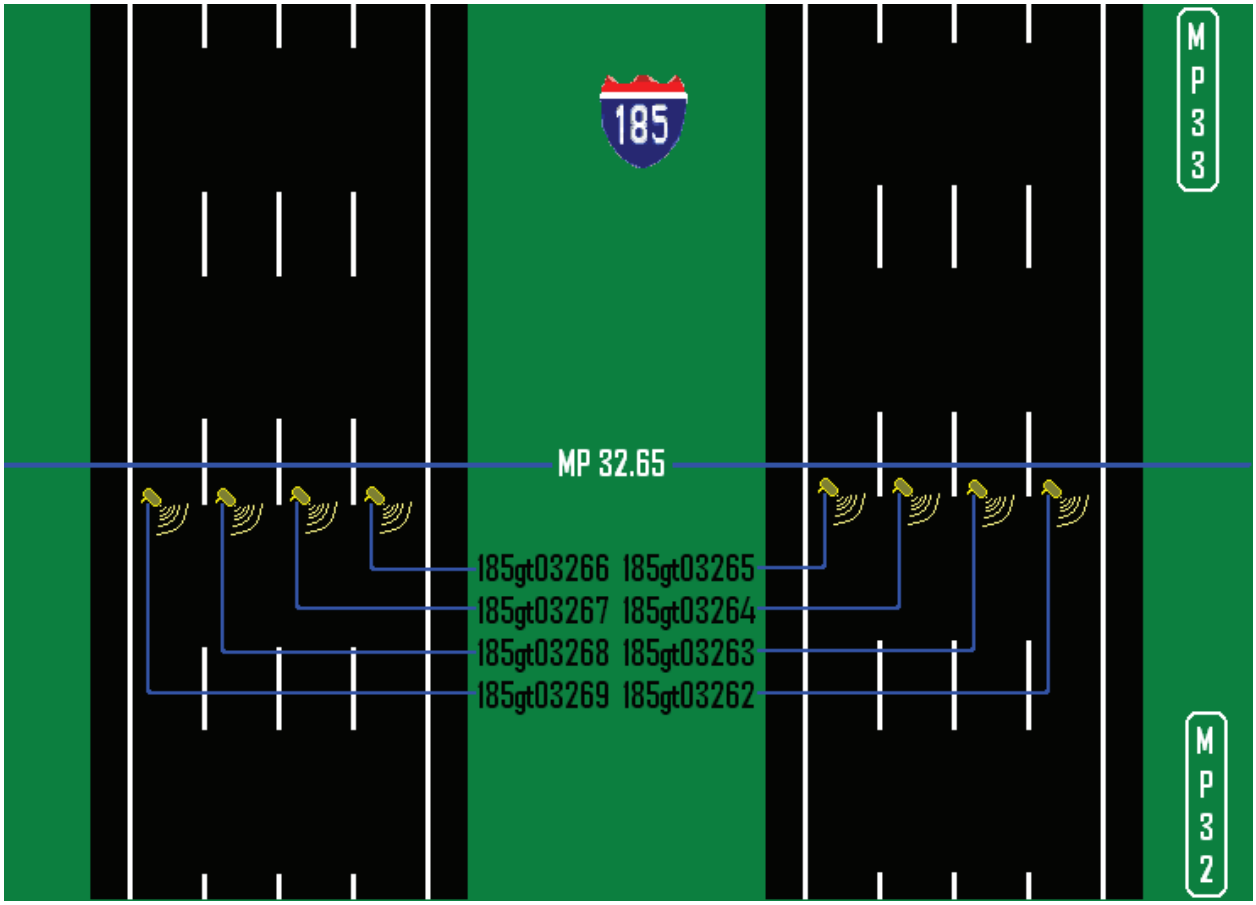
ITS Device Naming Scheme (325-v4)

As the switch to a new central computer system begins, the issue of device names has been addressed by the following rules and concepts. This naming scheme is a concatenation of the roadway, device type and milepost of the device. The naming scheme addresses several issues as explained in the following paragraphs.

This is an evolving document. New codes will be assigned as new device types are designed and installed. Input into this document is encouraged from all users of the naming scheme.

First, the name is universal – that is, all who have a need to refer to the device uses the same name. This includes maintenance personnel, operational personnel, users of archived data, members of the media, and those who program the system. To encourage the use of the universal name, the names are as concise as possible, to avoid the tendency to arbitrarily shorten the name or assign nicknames.

Each name must be unique. Duplicate names are not allowed. In the case of multiple devices of the same type installed at the same milepost (e.g. CMS on right and left shoulders), the milepost field of the devices will increase from right to left (facing the direction of ascending milepost). The device closest to the median (or the one to the right of the median, if 2 devices are equidistant) shall be named for the actual milepost; the others shall have their names adjusted by hundredths in order to create a unique name. See the sketch of 8 Gadgets installed at milepost 32.65 on Interstate 185.



The naming scheme accommodates devices being installed at different times, yet maintains a numerical order along the roadway. The names are assigned by working with design, operations and maintenance to develop mutually acceptable names. Once assigned, a device name CANNOT be changed without express permission from the naming commission.

The central system communicates with some devices. These devices are defined in a database that the system uses for communication purposes. The database will contain the official name of record. Official names for devices not connected to the central system will be maintained by the ITS Implementation Engineer

Essentially, the name consists of 3 concatenated fields: roadway number, type code, and milepost.

The roadway number is the Sign Route number or the Interstate number. If the roadway is a coincidental alignment, the primary route will prevail, according to the hierarchy shown below.

If the route is a spur from another road, the device name will not contain an indication of the spur. The roadway field will indicate the road is a spur. Likewise, if the route is an alternate roadway, the device name will not reflect the roadway is an alternate. The roadway field will indicate the road is an alternate. See the examples.

Roadway Hierarchy
Interstate
US Highway
State Route

The type code is 2 alphabetic characters that indicate the type of device being named. The list below shows the new type code as well as the type codes used by the VAX system.

Device	New Code	"VAX" Code
Call Box	cb	
communication HuB	hb	-
Changeable Message sign	cm	-
closed circuit Video Camera	vc	CCTV
Drum Sign	ds	-
Electronic Surveillance	es	ES
Flashing Beacon	fb	
Fiber optic Terminal cabinet	ft	-
HAR Sign	hs	HARS
HAR Transmitter	ht	HART
Information & Speed sign	is	
Lane Control sign	lc	
Licenseplate Reader	lr	
Movable Gate	mg	
Neon Sign	ns	-
Reversible Controller	rc	GC
toll Rate sign	rs	
Security Device	sd	-
variable Speed Limit sign	sl	
Tag Reader	tr	
Terminal Cabinet	tc	-
TolL controller	tl	
Traffic Signal	ts	-
Travel Time sign	tt	
Transformer	↯xf	
Variable Message sign	vm	VMS
Weather Station	ws	-
weigh station		-

The third part of the name is the device "number": a 5-digit value derived from the milepost. The number uses 3 digits of milepost miles (including leading 0s if necessary), followed by 2 digits of hundredths of miles (without the decimal point). For example, milepost 123.45 is device number 12345 and milepost 67.89 is device number 06789. See the examples below. Note: The milepost used to determine the device name is based on the milepost of the actual device, NOT the milepost of the cabinet. For cameras, it is the camera itself; for HAR transmitters, it is the antenna pole; for VMS & HAR signs, it is the sign; for ES devices, it is the mainline loops (averaged if the loops are at different locations).

Special Cases: special cases will be addressed as they occur.

- WSDOT devices that are not associated with/assigned to a state highway
    - These devices will have a non-existent roadway designation (i.e. ___xx#####)

- These devices may have a non-milepost numerical code that is unique to the device. For example, video cameras may use the switch port number, because it is unique to the device.

- Devices owned by other agencies (accessible by WSDOT)
  - Rather than a roadway designator, these devices will have a 3-character agency designator, followed by the 2-character device type and 5-character field containing the name/number used by the owning agency. For example, a camera owned by the City of Bellevue: BLVvc00012
- Devices owned/located in another state or province (accessible by WSDOT)
  - These devices will follow the WSDOT naming scheme even if the owner uses a different scheme. A field in the database (other than the name field) will indicate the ownership of the device.
- Special characters allowed:

Char	Name	Char	Name	Char	Name
!	Exclamation	*	Asterisk	>	Close Angle
#	Pound	-	Hyphen	?	Question
$	Dollar	~	Tilde	@	At
%	Percent	/	Slash	^	Caret
		<	Open Angle		

- Prohibited Special characters:

Char	Name	Char	Name	Char	Name
	Space	,	Comma	:	Colon
;	Semicolon	=	Equal	“	Double quote
\	Back slash	{	Open brace	}	Close brace
[	Open bracket	]	Close bracket	|	Pipe
(	Open parenthesis	)	Close parenthesis	+	Plus
&	Ampersand	.	Period	`	Apostrophe
‘	Open quote				

For roadway devices:

RRRttMMMMM

where RRR = 3 digits of roadway, including leading 0s

tt = 2 characters of device type, see above

MMMMM = 5 digits of milepost (leading 0s, hundredths of mile, no decimal point)

For example a data station on SR 72 at milepost 20.76 would be named 072es02076.

For non-roadway devices:

___ttDDDDD

where ___ = 3 characters indicating non-roadway device

tt = 2 characters of device type, see below

DDDDD = 5 digits of device ID

For example a CCTV at the boat house would be named ---vc00593.

For non-WSDOT devices:

CCCttDDDDD

where CCC = 3 characters indicating owning agency

tt = 2 characters of device type, see below

DDDDD = 5 digits of agency device number

For example a Bellevue CCTV on NE 8th could be named BLVvc00076.

Since "dynamic" refers to all but static message signs, a distinction between variable, changeable, drum and neon signs is provided, using VM, CM, DS, and NS..

Note: security devices may use different technologies (infrared, video, etc). Therefore, different device types may be included in this category.

Note: electronic surveillance includes all traffic counting devices, such as data collectors, ramp meters, RTMS, etc. Another field in the database will distinguish the device type.

Device	Sub Type	Sub-type Code
Electronic Surveillance	data station	DS
	ramp meter	RM
	microwave detector	MD
	radar detector	RD
	video detector	VD

Owner	Owner Code
City of Bellevue	BLV
City of Kent	KNT
County of King	KCO
City of Lynnwood	LYN
City of Redmond	RED
City of Renton	RNT
City of Seattle	SEA

Examples:

Name	Roadway	Side	Milepost	Location
002es00254	US 2	S	02.54	SB I-5 - EB
002vm00272	US 2	M	02.72	12th Avenue S
005es16247	I-5	W	162.47	NB SR99-SB
005es18815	I-5	W	188.15	SB SR99-SB
020es09912	SR 20	S	99.13	Deception Pass
020es09913	SR 20 Spur	S	99.13	Maple Street
090es00249	I-90	S	02.49	NB I-5 - EB
090rc00257	I-90	S	02.57	4th Ave S-EB
097es10247	SR 97	E	102.48	Lincoln Rock
097es10248	SR 97 Alt	E	102.48	Rocky Reach Dam
405es02862	I-405	M	28.62	200th St SE
405es02955	I-405	W	29.55	Filbert Rd/SR524
405ns02896	I-405	W	28.96	Damson Rd
520es00141	SR 520	E	1.41	164th St SW
520es00171	SR 520	W	1.71	156th St SW
525es00066	SR 525	W	0.66	Ash Way
525vc00095	SR 525	E	0.95	Alderwood Mall
---vc01010	I-90	U	6.90	Boat house
BLVvc00203				Bellevue 4th & 116th
---vc01011	I-90	I	6.99	MIL Control Room
---vc01012	I-5	U	156.99	Signal Security
SEAvc02003				Seattle 2nd & Pine
205es01479	I-205	E	14.79	Monterey Avenue